Avisit to Bulman's...

TWO PLANTS
WINNIPEG, MAN. VANCOUVER, B.C.

Leaders in Fine Lithography

\$ 1

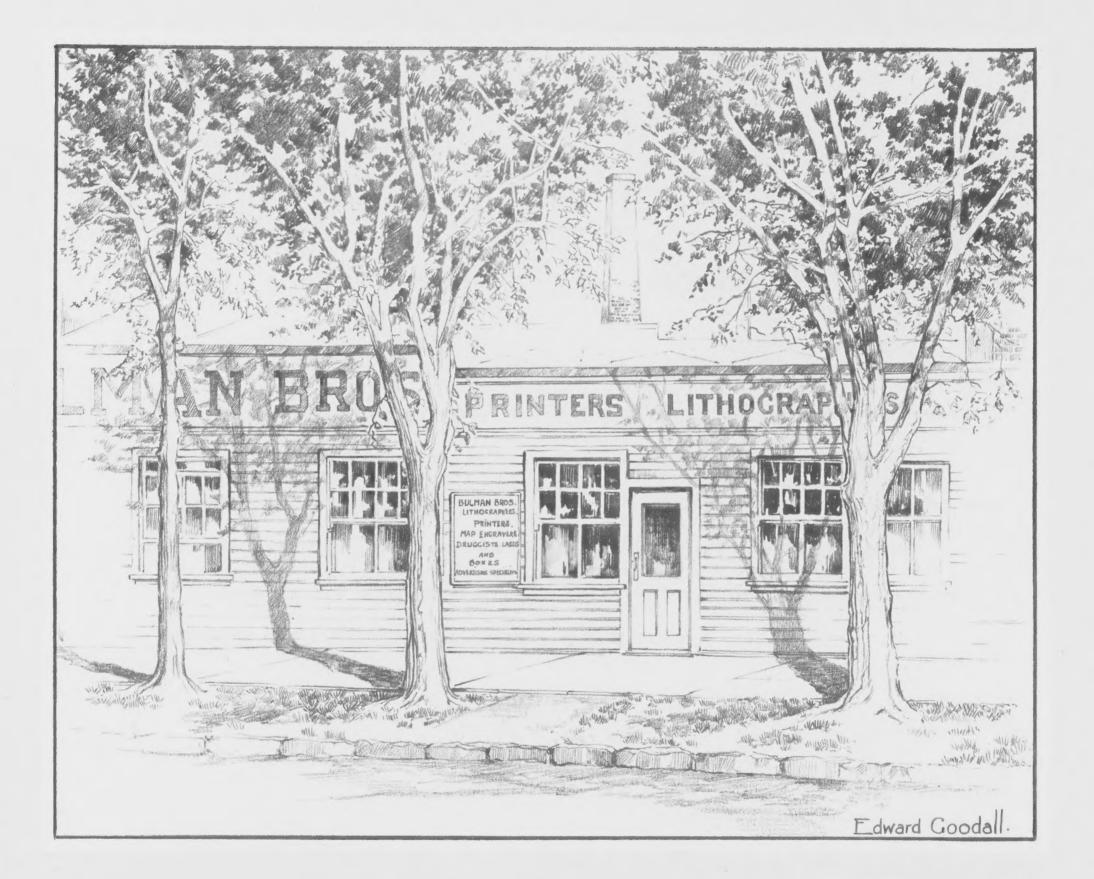
To vur friends

We invite you to visit us. To us there's something very stimulating in the interest our friends and customers show in our craft. As a memento for our visitors, we have prepared this booklet, "A Visit to

Bulman's," which explains and illustrates the many different operations the visitor observes as he follows the progress of a job through each department. We offer it with our compliments, in the belief that it will be of

interest, not only to those who have visited us, but also to our many other customers and friends who have so often shown a welcome curiosity in "how things were done" in the production of fine lithography.

BULMAN BROS. LIMITED, LITHOGRAPHERS AND PRINTERS



we lithograph alabel...



E'RE marketing a new line of paint," said the customer. "We want something — well, something modern and different — in a lithographed label. We think we'd like quite

a bit of green in it. What can you do for us?" Later that day, a Bulman salesman made out an order for a paint label sketch. "Prepare sketch for Happy Home Paint Company label," he wrote.

"Sketch to be suitable for pint, quart and gallon size containers. Customer prefers design to show green predominating." The dimensions of the different labels were also given. A stenographer in Bulman's main office typed these instructions on a large kraft envelope, or work ticket. This ticket would accompany the job through the plant; and, as the work progressed, more instructions would be added. Like all Bulman's work tickets, it was numbered. It was Ticket No. 5074.



HROUGH the glass partitions of the Plant Superintendent's office, rows of lithographic and type presses can be seen rolling out their daily quota of sheets, and a faint hum of machinery may be heard. It was to this office, the nerve centre of the plant, that Ticket 5074 was sent first. Here a record is kept of all work in the plant, and the progress of each order is checked from day to day, from the time it is first received until the completed job leaves the shipping room. After the Superintendent had familiarized himself with the instructions, his assistant entered the details of Ticket 5074 on a card index. Then, immediately, he took the work ticket to the Art Department.



ABELS are but one of many kinds of lithography produced by Bulman Bros. Limited.

The commercial stationery field also is fully covered. In Bulman's airy, spacious

Layout Department, folders, booklets, magazines and direct mail campaigns are

planned, prepared and scheduled. This Department provides experienced and

capable layout and copy services for the customer. In addition it offers helpful and

candid advice on customers' printing and advertising problems. In this creative

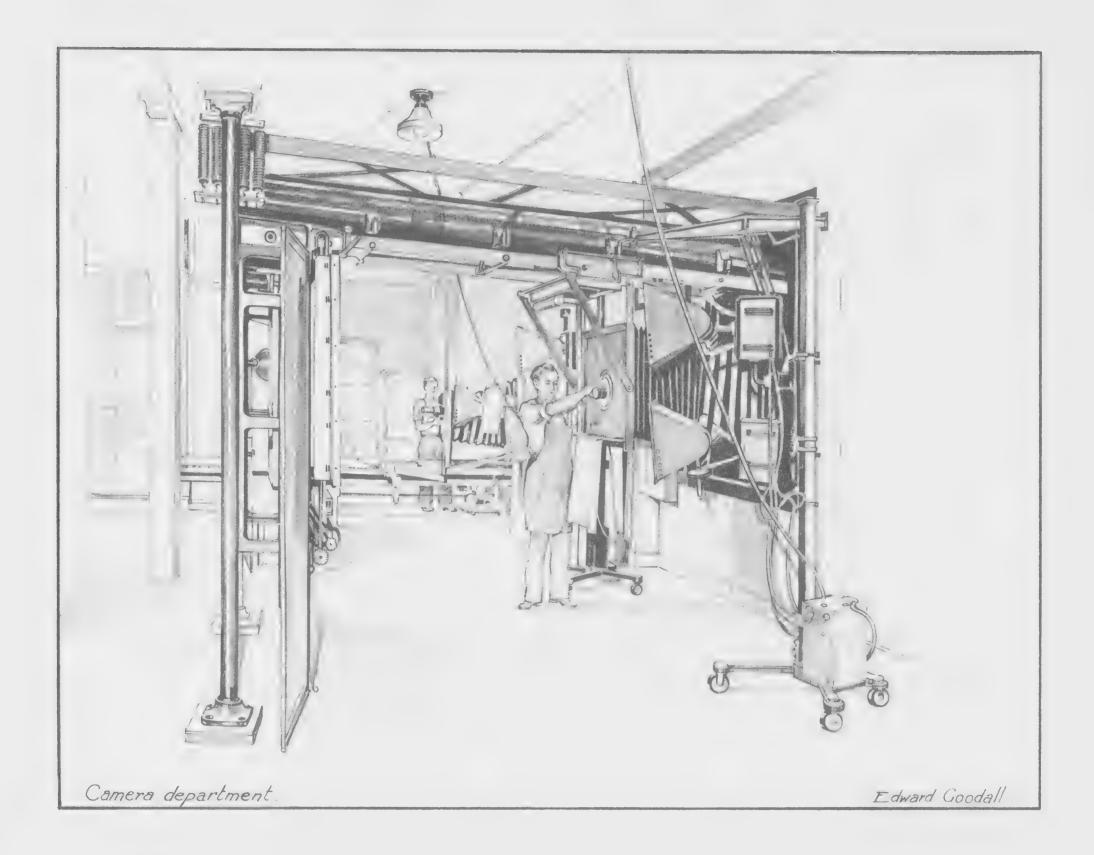
Department a layout of the "Happy Home" label will be made showing the size of

sheet to be used and the number of labels to be lithographed on a sheet.

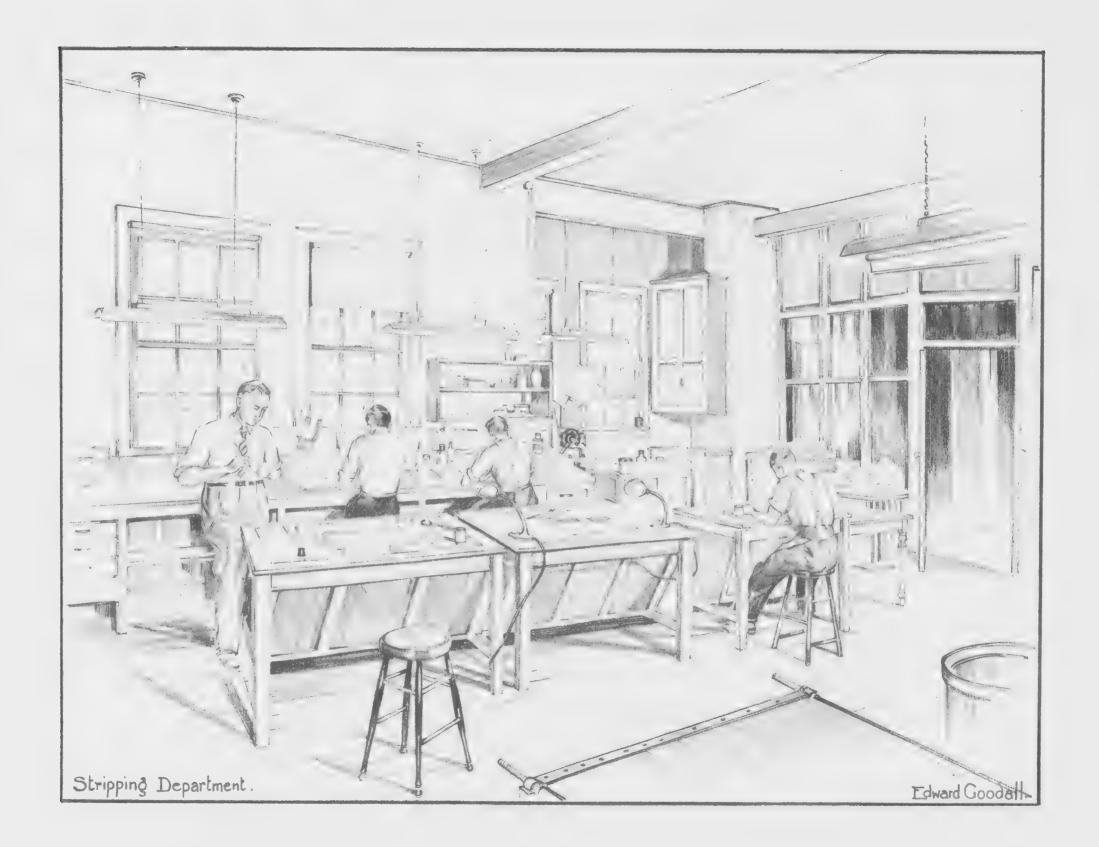


N the Art Department, the artist studied labels which the Happy Home Paint Company and its competitors were currently using. The label he was to create must be new and different, with an eye-appeal strong enough to meet any competition, to attract the public, and help sell the product. He made several sketches before one satisfied him. The final sketch was a dynamic four-color design, with green—as the customer had suggested—the predominating color. A four-color design may contain all colors—green, brown, yellow, orange, purple, red, blue, black. "Four-color" is another way of saying "full color."

Following the customer's "OK," the artist separated the design into four key drawings. On one he painted in only the parts of the original design which contained the blue tones, on another the parts with yellow tones, on a third the parts with red tones, and on a fourth—the key sketch—the parts in black.



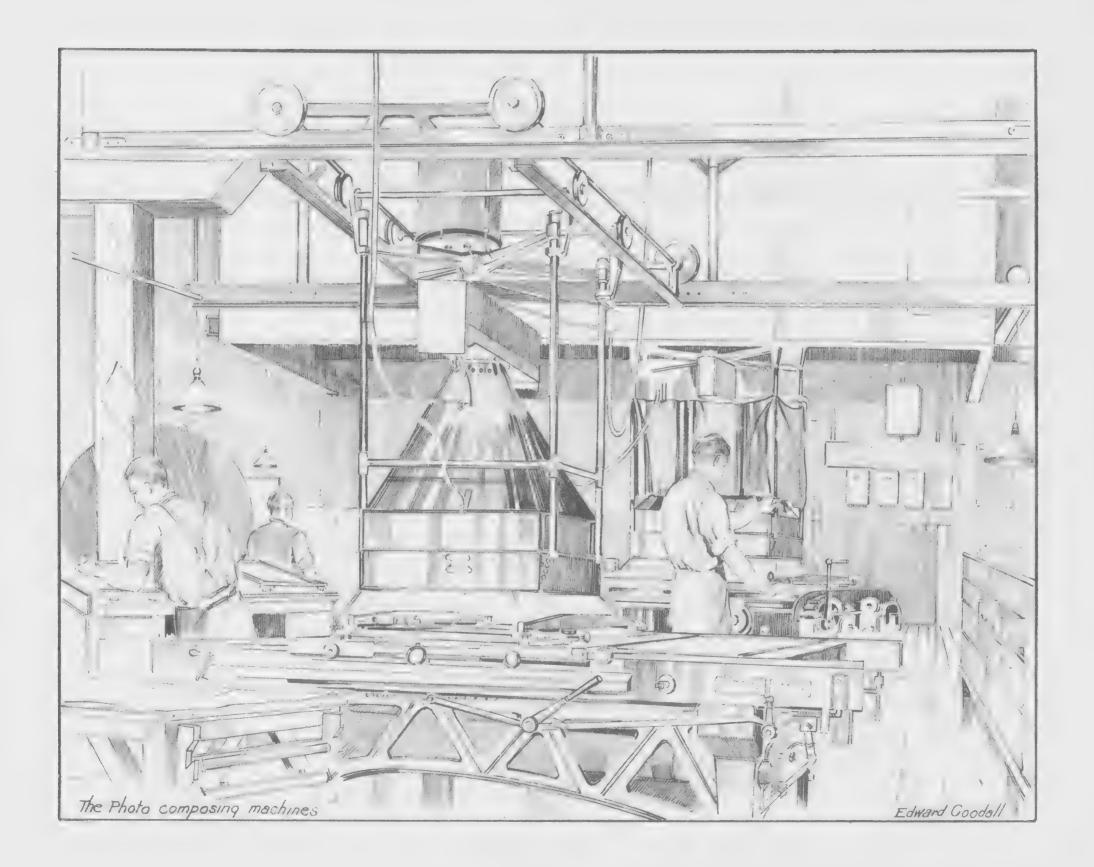
HE four separated drawings of the label — one for each of the process colors — went next, together with Work Ticket 5074, to the Camera Department. On the copyboard of a highly intricate precision process camera, with 8,000 watt arc lamps, and automatic focussing, the photographer placed the four drawings for photographing. From the four drawings he made four negatives — one for the blue tones, one for the yellow tones, one for the red tones and one for the black on the label. From these negatives the red, blue, yellow and black lithographic plates would be made. These negatives were then taken to the Stripping Department.



HE Assembly or Stripping Department of any lithographing company is a product of modern
advanced methods. Hand transferring is rapidly becoming a forgotten art. What the transfer
man formerly did by hand is now being done by photo-composing machines such as the directoplate
and the printing frame. He is now turning his skill to assembling jobs for these machines. Experience
has proven that certain types of work can be handled more expeditiously if assembled in multiples, which,
in close register jobs, requires the highest kind of precision work. This department works in close
liaison with our type department, for a large percentage of the work assembled here requires the
use of type. The setting of the directions for the Happy Home label is an example of this.



ITH the negatives made, the next step was to transfer the image of each color on to thin zinc
lithographic plates. Before this could be done, one side of the plates which were to take
the image had to be grained, so that they would retain moisture. The plates were put in
a grainer, a flat-topped machine with a shallow trough, and steel balls were placed on top of
them. The balls were then sprinkled with carborundum and sprayed with water, which formed a
grimy paste. The gentle shuffling motion of the graining machine kept the steel balls moving in
this paste over the surface of the plates, so that a grain was formed. Having been grained,
the plates were then put in a whirler and coated with a photosensitive solution.



HE sensitized plate was then fastened securely on the bed of a photocomposing machine. The

negative for the black tones of the Happy Home paint label was placed in a chase, which

fitted by vacuum contact on top of the plate, and was then exposed to an intense arc light for a

minute and a half, being moved from one position to another until the required number of exposures

had been made. The lithographer then rubbed up the plate with developing ink, and immersed it in

warm water. The water removed all the coating and ink from the plate, except on those parts where

the light had struck through the transparent parts of the negative. On these areas remained the

inked image of the black portions of the label. Finally, the lithographer etched the plate

with acid, to counteract greasiness, and gummed it with gum arabic to protect it from air.



LATES for the yellow, red and blue parts of the label had been prepared in the same way as the

plate for the black printing. All four went to the pressroom. There the pressman's helper removed

the gum arabic, exposing the greasy image on each plate. The plate with the yellow portion of

the label was then attached to a large cylinder on the rear unit of a two-color offset press. When the press

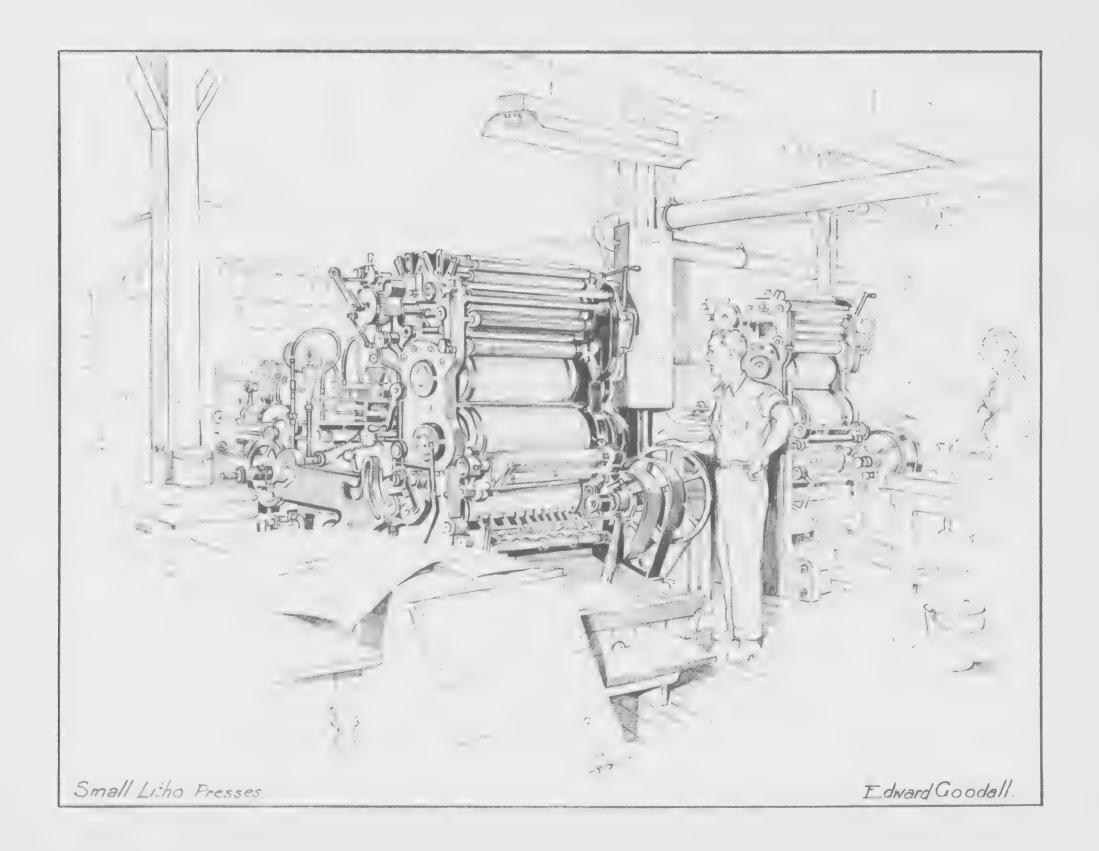
was started, this plate cylinder revolved, coming in contact with a set of water rollers. The water did not adhere

to the greasy image on the plate, as the grease made it water-repellent, but it did adhere to the rest of the plate,

because the grain of the plate held the moisture. The plate cylinder continued to turn and came in contact

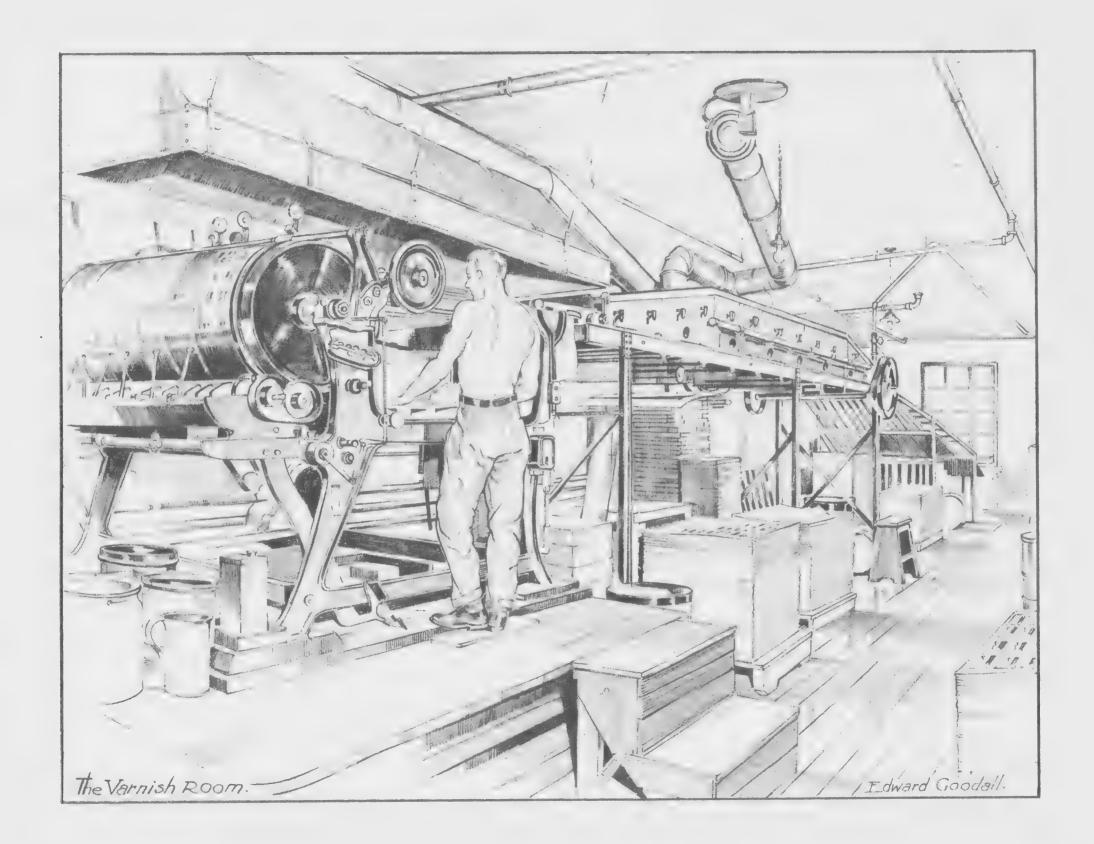
next with the rollers carrying yellow ink. The ink adhered to the greasy image on the plate, but was

repelled by the wet portion of the plate, so that only the image on the plate picked up the yellow ink.



HIS plate cylinder next came in contact with a cylinder covered with a rubber blanket. Fressure
transferred the yellow image to this blanket. As the rubber blanket cylinder revolved, it came in
contact with the paper, transferring the yellow image to the sheet. Simultaneously, the process was
going on, on the second, or front unit of the press. On the plate cylinder of that unit, the plate with the
red portions of the label had been attached. Fed automatically into the back of the press, the paper
contacted the rubber blanket carrying the yellow image, on the rear unit, then was carried by a transfer
cylinder to the front unit of the press, where it contacted the rubber blanket carrying the red image.

Now, lithographed in two colors, it was carried to a delivery platform. When the ink had dried,
the sheets were run through the press again to lithograph the blue and black parts of the label.



HEN the labels had been lithographed, they were taken, in the whole sheet,

to the varnishing room. Varnish adds a high gloss to labels, which makes their colors

brighter and increases their eye-appeal. And because eye-appeal is an important selling factor, the

Happy Home Paint Company ordered that its new labels, like all the other labels it used, should be

varnished. On the varnisher, a 90-foot long machine, they were coated with a mixture of alcohol

and varnish, then passed through a gas drying oven. In addition to the brightness it added,

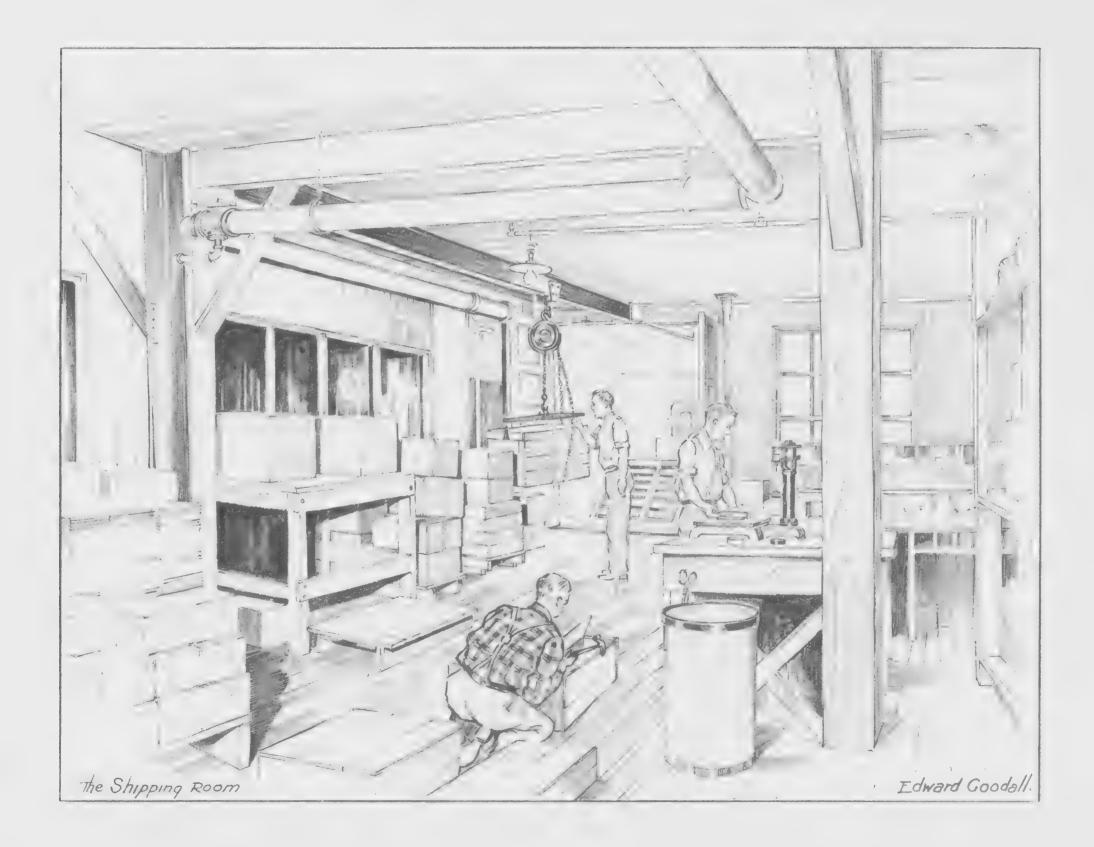
the varnish protected the labels from fading and dirt, two real destroyers of all labels.



HE sheets of lithographed varnished labels were piled on a skid, and taken to the bindery on a lift truck. When they had been carefully inspected, a cutter slid the sheets, 1,000 at a time, under the knife of a cutting machine, and set the machine to cut the width of the label. Its big knife sliced the pile of labels into strips, automatically moving the strips forward on to the

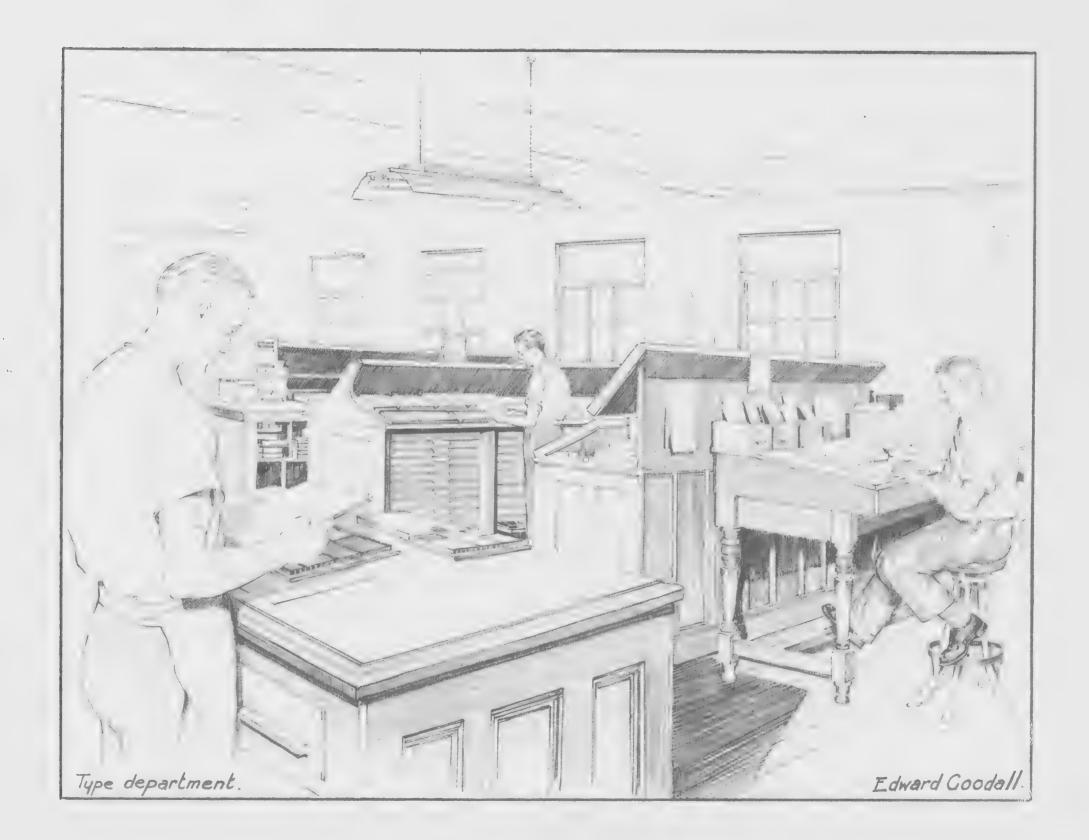
Still in piles of 1,000, the strips went to a trimming machine, where they were cut into individual labels, and carried along a conveyor belt. At the end of the conveyor belt, bindery girls banded the trimmed labels, 1,000 to a bundle, with kraft paper.

apron of the machine and pushing forward the remainder of the sheet, ready for the next cut.

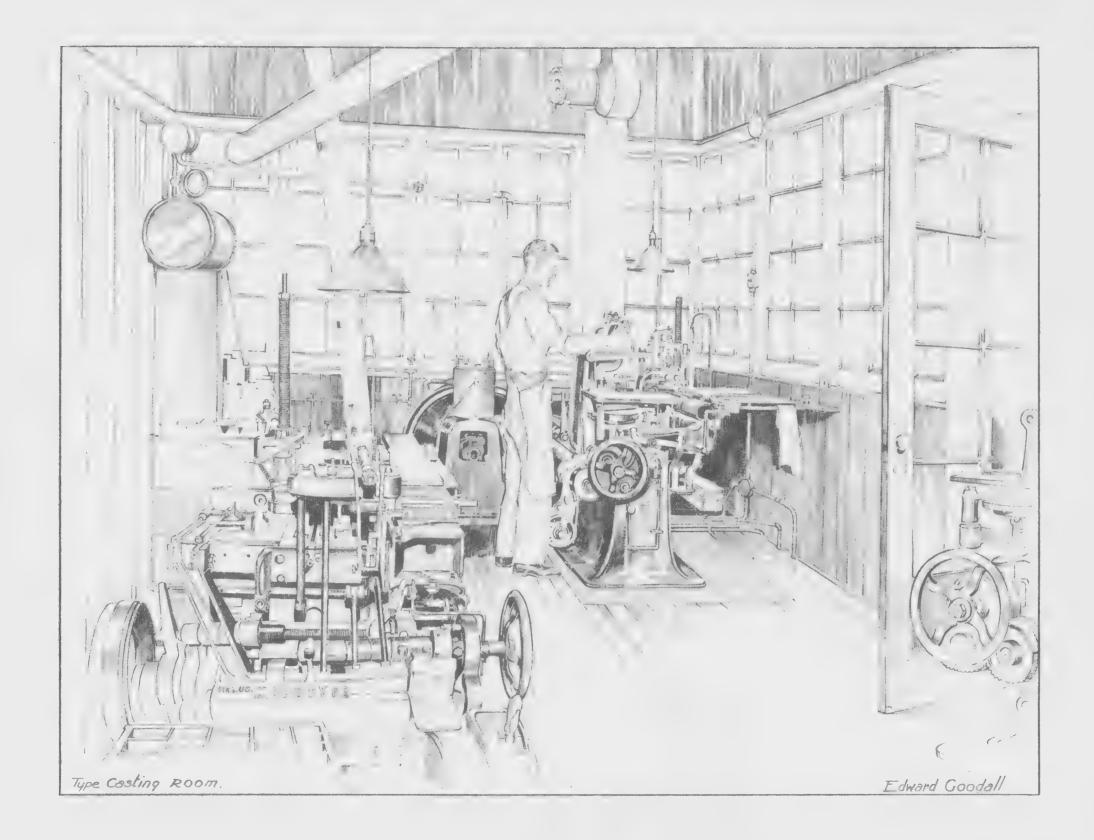


HE labels were given a final inspection, and then, in the busy shipping room, they were packed carefully on their sides. This was done because varnished labels lying flat sometimes stick together after a period of time. A sticker on each package told the customer which side up the package should be kept. And then they were delivered. The Bulman Bros. organization had produced a label of which it could be justly proud. Modern methods, up-to-date machinery and a conscientious and skilled craftsmanship had made this possible. Everyone who had worked on the job had contributed something essential to it. It was the creation, not of one

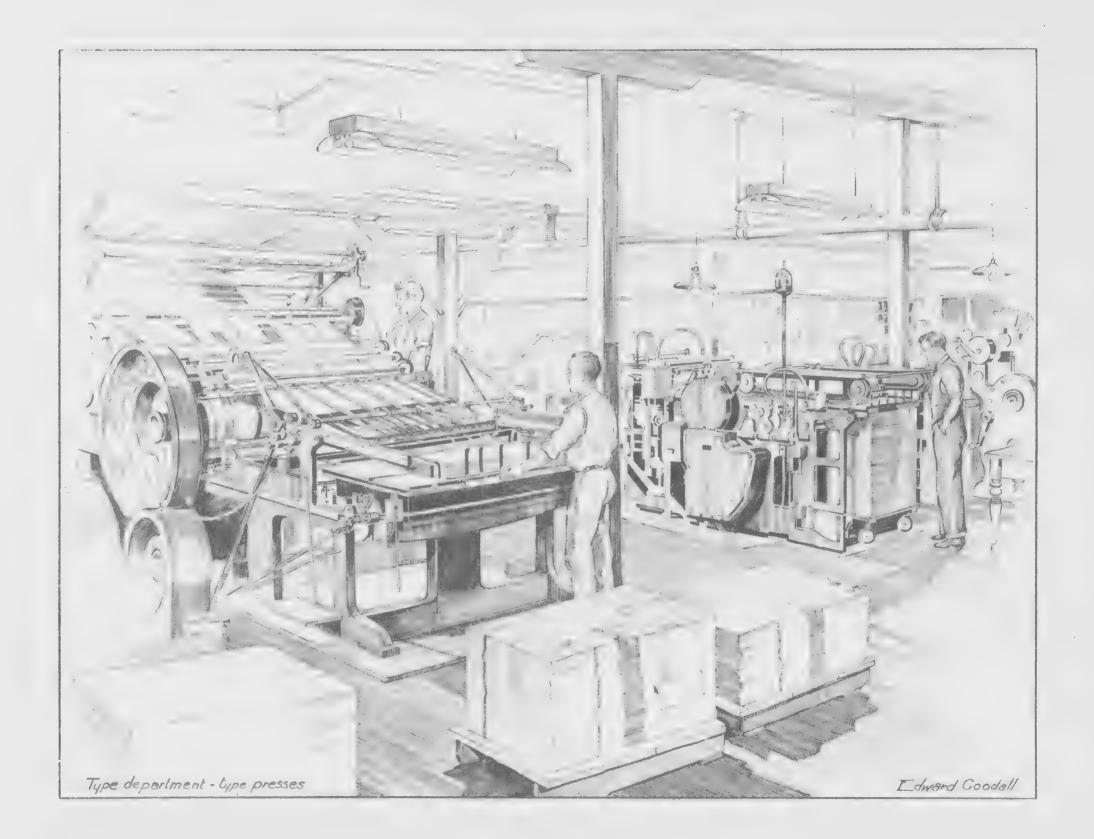
machine, or of one man, or of one department, but of a whole organization working together.



OMPOSING ROOM. The demands of modern typography are many and varied. Time was when a few
fonts of type would suffice for any and every job. Today each piece of work must be given individual
treatment. Not only must the format be ultra-modern, but the type used must be in keeping. Type
suitable for one job would be entirely inappropriate for another. The close association of this department
with the lithographic end of our business requires that the selection of types carried must be such as to meet
the requirements of an exacting clientele. We have tried to meet this specialized demand with a wide
variety of type faces. Whether your printing be business, professional, or personal, we have the correct
type. Our other composing room equipment is as modern as tomorrow—steel type cabinets, steel imposing
stones and up-to-date type setting machines. All jobs large or small receive our most careful attention.



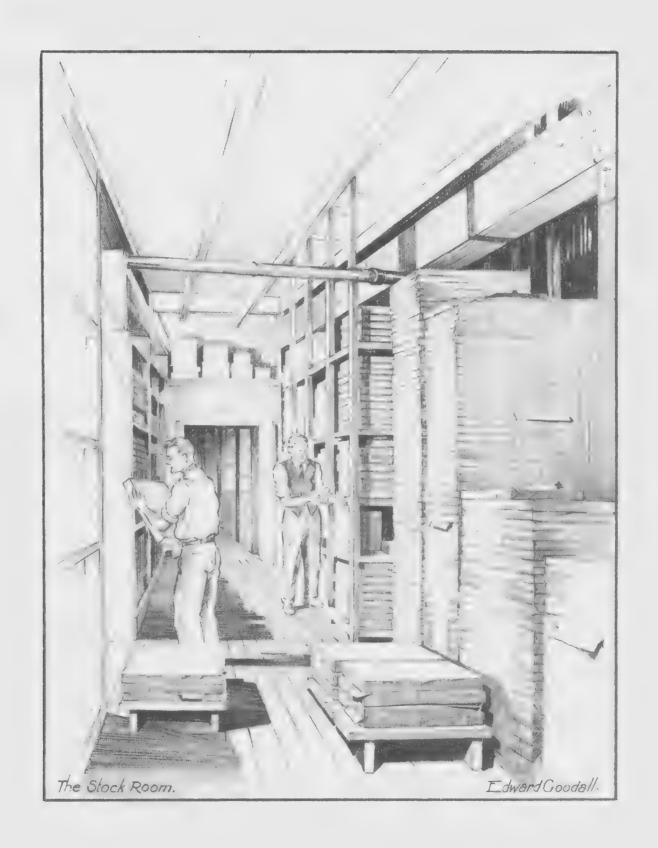
HE MONOTYPE. The Monotype is a typesetting machine which, as the name indicates, casts single type characters. It is a two-unit machine—a keyboard and a caster. On the keyboard unit a roll of paper is perforated as the operator strikes the keys. This perforated roll is then placed in the casting unit. The perforations on the roll govern the action of the casting machine, which casts the characters one at a time. The Monotype is an important part of Bulman's composing room equipment. Its versatility is practically unlimited. Not only is it a typesetting machine, but it is also a type and rule casting machine. The most intricate forms of composition present no problem for the Monotype. Bulman's composing room is also equipped with the latest model Intertype, which is a line-casting machine.



presses than by any other method. For this reason, although Bulman's is essentially a lithographic plant, it also maintains adequate facilities for printing from type. Practically all numbering of both lithographed and printing jobs is done on one or other of the type presses. Perforating may also be done at the same time as printing, thus eliminating an extra operation. The type pressroom can handle any type of commercial printing. Its many platen and cylinder presses are of various sizes, permitting a wide range in the size of printing sheet used.



ICKET DEPARTMENT. In a restricted sense, tickets are the equivalent of money. They are worth their face value in cash to the companies which issue them, and to the customers who buy them. In producing them, every safeguard possible must be taken. For that reason, Bulman's Ticket Division operates behind a locked grille, quite separate from the rest of the plant. All employees concerned directly with ticket room production are bonded. Transfers, premium coupons, and small labels, as well as roll, fanfold and sheet tickets are printed in this department. Among the presses in the Ticket Division is the web-fed automatic press shown in the illustration. It prints both sides of a roll at one time, one color on the back, and up to three colors on the front. Operating at high speed, it perforates, numbers, punches, die cuts, and slits vertically at the same time as printing. It delivers the paper in the sheet, or in the roll.



TOCKROOM. The shelves of our stockroom are filled with papers of various finishes and weights —

dull-finished antiques and offsets, shiny coated book papers, label paper, gummed and ungummed, crisp,

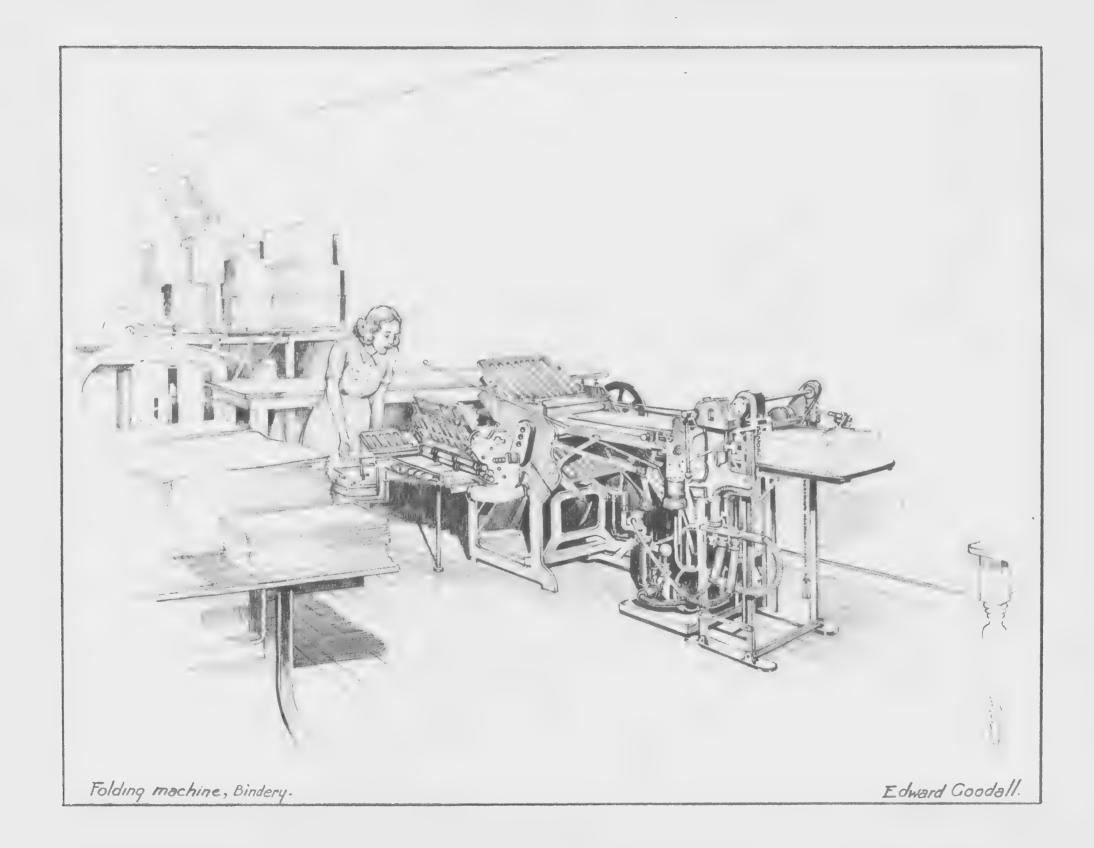
crinkly rag bonds, cover boards in pastel hues, stiff ledger papers, specialty papers that simulate marble or

leather, and a large supply of papers which are for our own exclusive use. In connection with our stockroom

we have a drying room. If a job calls for close register, we take the extra precaution of having it "racked

out." The paper is hung up in such a way that warm, dry air can pass between each sheet. This

ensures that all sheets will dry to the same degree, and will have the same moisture content.

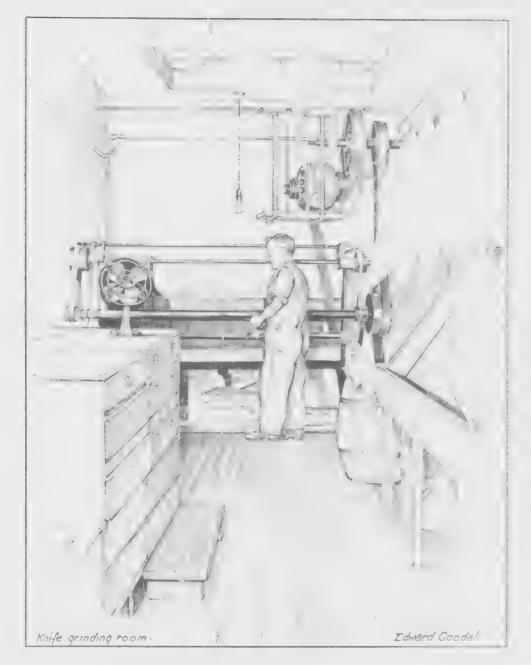


INDERY. Cutting, perforating, punching, binding and stitching are only a few of the routine operations carried out in Bulman's bindery, where up-to-date equipment and a competent staff ensure both speed and efficiency. In addition to the large straight-edge cutters, a special diecutting machine cuts labels to any desired shape. A bracket trimmer also speeds up cutting operations. For quantity runs, a modern gang-stitcher stitches several books simultaneously.

Speedy folding machines perform the multiple folding operations required by maps,

timetables, magazines and folders. Before leaving the bindery a careful inspection

ensures that every job measures up to the high standard of Bulman craftsmanship.





NIFE GRINDING, AND MAINTENANCE. While the great majority of our employees are actively engaged in the direct production of our lithographed and printed jobs, there are a number of behind-the-scene employees whose contributions, indirectly, have played

an equally important part. Just to mention two of these: The maintenance man—the man
who sharpens the cutting machine knives and grains the lithographic plates—must do his work

perfectly, or the finished product will not be up to the standard we demand of a Bulman

job. And the machinist is expected to keep all the equipment in perfect running order, to install new machinery, and to attend to half a dozen repair jobs at the same time.





